

1 **Section 4-1500 FOD - Floodplain Overlay District**

2
3 **4-1501 Purpose and Intent.** These provisions are created to regulate and restrict land use
4 in areas within the County which are subject to severe periodic inundation, in such
5 a manner as to: (1) protect life and prevent or minimize property damage; (2)
6 reduce public costs for flood control, rescue and relief efforts occasioned by
7 unwise use or occupancy of such areas; (3) conserve the natural state of
8 watercourses and watersheds, and minimize the damaging effects which
9 development has on drainage conditions, pollution of streams, and other
10 environmental impacts on the County's water sources; (4) comply with Federal and
11 State laws and regulations that address the need for floodplain management and
12 protection; and (5) qualify Loudoun residents for the insurance and subsidies
13 provided by the National Flood Insurance Program. Only those uses set forth in
14 Section 4-1505 and 4-1506 shall be permitted by right or special exception within
15 the Floodplain Overlay District, and land so encumbered may be used in a manner
16 permitted in the underlying district only if and to the extent such use is also
17 permitted in the overlay district.

18
19 **4-1502 Authority.** Authority for these provisions includes:

- 20
21 (A) Flood Damage Reduction Act, Va. Code Sections 62.1-44.108 et seq.
22
23 (B) Chapter 11, Title 15.1, Code of Virginia (Planning, Subdivision of Land
24 and Zoning).
25
26 (C) Soil Conservation Districts Law, Va. Code Sections 21-2(c), 21-2(d).
27
28 (D) Virginia Environmental Quality Act, Va. Code Section 10-178.
29
30 (E) Erosion and Sediment Control Act, Va. Code Section 21-89.2.
31
32 (F) Potomac River Basin Compact, Va. Code Section 62.1-69.1.
33
34 (G) National Flood Insurance Act of 1968, 42 U.S.C. 4001 et seq.

35
36 **4-1503 Definitions.** Unless otherwise specially provided, or unless clearly required by the
37 context, the words and phrases defined in this subsection shall have the following
38 meanings when used in Section 4-1500.

- 39
40 (A) **Alteration.** A development action which will change the cross section
41 of the floodplain and will increase either the erosive velocity or height
42 of floodwaters either on-site or off-site. Alterations include, but are not

limited to, land disturbing activities such as clearing, grading, excavating, transportation and filling of land.

(B) **Base Flood.** The flood having a one (1) percent chance of being equalled or exceeded in any given year. Also known as the 100-year flood.

(C) **Cross section.** Shape and dimensions of a channel and valley of the floodplain perpendicular to the line of flow.

(D) **Floodplain.** Any land area susceptible to being inundated by water from the base flood and having a drainage area greater than one hundred (100) acres. For purposes of regulation under this Ordinance, a distinction is made between floodplains in watersheds of greater than 640 acres, and those in watersheds of less than 640 acres.

(E) **Road, Crossing of the Floodplain.** Any improved right-of-way traversing a floodplain generally perpendicular to the flow of the drainageway. Driveways serving one (1) lot shall not be considered road crossings.

(F) **Stormwater Management Improvements.** Surface drainage improvements, storm sewers, detention and retention ponds and other such improvements as required under authority of the Loudoun County Erosion Control Ordinance and Plan, Chapter 1220 of the Loudoun County Code.

(G) **Utility Lines in the Floodplain.** Storm sewers, sanitary sewers, water lines and similar lines running generally parallel and perpendicular to the flow of the drainageway; and other public utility lines traversing a floodplain generally perpendicular to the flow of the drainageway.

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Administration.

(A) The sources of delineation of the floodplain shall include, but shall not be limited to:

- (1) Flood Insurance Study of Loudoun County, Virginia, unincorporated areas by the Federal Emergency Management Agency (FEMA) (November, 1985, as amended) (This study shall represent the minimum identification of the floodplain. Any changes to the Flood Insurance Rate Map data contained in this study shall have the prior approval of the Federal Insurance Administration);

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- 1 (2) Flood hazard studies by USDA-Soil Conservation Service;
2
3 (3) Floodplain studies by other Federal agencies such as the Corps
4 of Engineers or the U.S. Geological Survey (USGS);
5
6 (4) Detailed site-specific floodplain studies conducted by consulting
7 engineering firms or government agencies;
8
9 (5) For the Potomac River, the flood of 1936 known elevations
10 along with a hydraulic gradient established by past flood events
11 and ground topography; and
12
13 (6) For the main stem of the Broad Run, from the Potomac River to
14 the confluence of the North and South Forks, The Floodplain
15 Study of the Broad Run Watershed, prepared by GKY and
16 Associates, Inc. dated December 1990, as amended.

17
18 (B) The watershed map of Loudoun County shall show the approximate
19 floodplain elevations and boundaries of watersheds greater than 100
20 acres and of watersheds greater than 640 acres. The Zoning
21 Administrator, in consultation with the Director of Environmental
22 Resources, is charged with making necessary cartographic interpretations
23 of those maps.

24
25 (C) The provisions of this Section shall apply to all land within a floodplain.
26 As used in this Section 4-1500, "floodplain" refers to certain areas whose
27 boundaries are determined and can be located on the ground by reference
28 to the definition of that term. The boundaries of the floodplain as shown
29 on the Floodplain Map of Loudoun County are intended to correspond to
30 the actual physical location of the floodplain. The Zoning Administrator,
31 in consultation with the Director of Environmental Resources, is
32 authorized to make necessary interpretations as to the exact location of
33 the boundaries of floodplains if there appears to be a conflict between the
34 mapped floodplain boundary, elevations and actual physical conditions.
35 Such interpretations may be appealed to the Board of Zoning Appeals in
36 accordance with the provisions of Section 6-1700. The Zoning
37 Administrator may require information from any applicant, including, but
38 not limited to a topographic survey and/or an engineering study of the
39 floodplain in conformance with the provisions of the Facilities Standards
40 Manual.

41
42 **4-1505**

Permitted Uses. The following uses, having a low flood damage potential and causing no obstruction of flood flows, shall be permitted within the Floodplain Overlay District. Uses allowed in the underlying district shall be prohibited to the extent not permitted by right or by special exception in the Floodplain Overlay District. Where any uses, structures or improvements will result in an alteration to

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1 the floodplain, applications for alterations must be submitted to the Zoning
2 Administrator in accordance with subsection 4-1508, and any alteration must meet
3 the criteria contained in that subsection.

4
5 (A) Permitted uses in the floodplain of streams draining greater than 640
6 acres.

7
8 (1) Agricultural uses such as general farming, pasture, grazing,
9 outdoor plant nurseries, horticulture, wildcrop harvesting,
10 vegetable gardens, truck farming and sod farming. In addition,
11 timber harvesting is permitted upon submission of a Timber
12 Management Plan that has been approved by the Virginia
13 Division of Forestry.

14
15 (2) Fishery uses such as fish hatcheries, fish harvesting.

16
17 (3) Public or private recreational uses such as golf courses and
18 driving ranges, archery ranges, picnic grounds, wildlife and
19 nature preserves, target ranges, trap and skeet ranges, hunting
20 and fishing areas, swimming areas (except for swimming pools)
21 hiking and horseback riding trails, play areas of a natural,
22 permeable nature, including ball fields and polo fields, and other
23 similar park and open space uses. Tennis courts, basketball
24 courts, and similar type courts are permitted provided
25 impervious surfaces do not exceed three percent (3%) of the
26 floodplain within the development, and are not located within
27 the floodway.

28
29 (4) Stormwater management improvements associated with uses
30 permitted by right or special exception in the Floodplain
31 Overlay District.

32
33 (5) Utility lines, road crossings, private drives, serving up to seven
34 (7) lots and private access easements serving low density
35 development, and Private Lanes serving up to twenty-five (25)
36 lots in the A-25 District as provided for in Section 2-107.

37
38 (6) Repair, reconstruction or improvement of existing residences, so
39 long as the footprint of the existing residence is not increased
40 and is not considered a substantial improvement. "Substantial
41 Improvement" means any repair, reconstruction or improvement

1 the cost of which equals or exceeds fifty percent (50%) of the
2 market value of the existing structure either (a) before the
3 improvement or repair is started, or (b) if the structure has been
4 damaged and is being restored, before the damage has occurred,
5 regardless of the actual repair work performed.

- 6
7 (7) Parking areas accessory to uses permitted by right or special
8 exception in Floodplain Overlay District.
9
10 (8) Incidental structures, not exceeding 840 square feet of floor
11 area, associated with permitted or approved special exception
12 uses in the Floodplain Overlay District. Such structures include
13 storage sheds, maintenance sheds, backstops, bath houses and
14 locker rooms. Provided, however, bulk storage of gasoline,
15 chemicals, fuels or similar substances are prohibited in the
16 Floodplain Overlay District.
17
18 (9) Temporary storage of material or equipment necessary in the
19 construction of uses or structures permitted by right or special
20 exception in the Floodplain Overlay District.
21
22 (10) Alterations of the floodplain associated with any permitted or
23 special exception uses in the Floodplain Overlay District.
24 However, no channelization shall occur except to protect
25 existing habitable structures subject to periodic flooding.
26 Applications for alterations of the floodplain must be submitted
27 in accordance with Section 4-1508. To the extent that the
28 elevations and boundaries of the floodplain change as a result of
29 the alteration action, any areas no longer within the floodplain
30 may be used for any use in the underlying district, subject to the
31 provisions of the applicable district regulations and conditions
32 of any approved special exception.
33
34 (11) Restoration and rehabilitation of historic structures included or
35 eligible for inclusion on a federal, state or local historic register.
36
37 (12) Road crossings subject to the procedures and standards in
38 Section 4-1508. If such a development action results in an off-
39 site increase in the water surface elevation of the base flood as
40 shown on the Floodplain Map of Loudoun County, it is subject
41 to the following criteria and provisions:

- 1 (a) The procedures and standards for alterations in Section 4-
2 1508 shall apply; provided, however, the proposed
3 crossing may result in a rise in the water surface elevation
4 of the base flood of no more than one (1) foot.
5
6 (b) The proposed crossing must be a feature shown on the
7 Comprehensive Plan.
8
9 (c) A floodplain alteration in accordance with the Facilities
10 Standards Manual shall be submitted delineating all
11 increases in the base flood, and the new floodplain limits
12 shall be approved by FEMA, where a FEMA designated
13 floodplain or floodway will be altered. There shall be no
14 increase allowed by FEMA in the base flood elevation
15 within FEMA designated floodway.
16
17 (d) The road crossing shall be designed and constructed in
18 accordance with the standards and regulations of the
19 Virginia Department of Transportation and/or the FSM,
20 whichever shall apply.
21
22 (e) An instrument describing the increase in the floodplain
23 limits, and executed by each affected property owner,
24 shall be recorded upon approval of the alteration for the
25 road crossing.
26
27 (f) The proposed crossing shall not result in an increase in the
28 water surface elevation of the base flood affecting existing
29 buildings and structures.
30
31 (g) Affected off-site property owners may at any time
32 mitigate impacts on their land as a result of an increase in
33 the water surface elevation of the base flood by:
34
35 (i) Including all, or a portion of, the land subject to the
36 increase in the base flood elevation for purposes of
37 calculating the permitted density or intensity of use
38 on the lot subject to such increase; and/or
39
40 (ii) Alterations in accordance with Section 5.440B of the
41 Facilities Standards Manual to reclaim that portion
42 of their land subject to the increase in water surface

elevation of the base flood as a result of the road crossing, provided there is no additional offsite rise in the 100-year water surface elevation; or

(iii) An affected landowner may request the following by special exception granted by the Board of Supervisors, in accordance with Section 4-1506 of the Zoning Ordinance, in conjunction with subsection 4-1505(A)(12)(g)(i):

(a) Adjustment of the building setback or parking setback requirements on specific lots or parcels of land affected by the increase in the elevation of the base flood; and/or

(b) Allocation of the density provided for in subsection 4-1505(A)(12)(g)(i) to other lots within the proposed development not directly subject to the increase in the base flood elevation. This provision is in addition to other density transfer provisions established by the Loudoun County Zoning Ordinance.

(13) Municipal drinking water supply reservoir.

(B) Permitted uses in the floodplain of streams draining less than 640 acres.

(1) Uses allowed under Section 4-1505(A).

(2) Alterations. Applications for alterations whether or not associated with a permitted or special exception use must be submitted in accordance with Section 4-1508 and any alteration must meet the criteria contained in that section. To the extent that the boundaries of the floodplain change as a result of the alteration, any areas no longer within the floodplain may be used for any use in the underlying district, subject to the provisions of the applicable district regulations and conditions of any approved special exception.

(3) Stormwater management improvements whether or not associated with uses permitted by right or special exception in the Floodplain Overlay District.

(4) Farm ponds designed by the Soil Conservation Service.

(5) Basketball or tennis courts, and swimming pools.

(6) Parking areas less than 5,000 square feet not otherwise permitted. Such parking areas shall not be subject to 100-year flooding greater than one foot in depth, shall be equipped with best management practices maintained by the property owner, and shall not require major fill.

4-1506

Special Exception Uses. The following uses and structures may be permitted in the floodplain by the Board of Supervisors by special exception, subject to Section 6-1300 and subsection 4-1507.

(A) Marinas, boat rentals, docks, piers, wharves, water ski jump facilities, and incidental structures associated with such uses, such as bath houses and locker rooms.

(B) Carnivals, circuses and similar transient amusement enterprises.

(C) Riding stables.

(D) Structures or uses required for the operation of a public utility, road crossings and stormwater management improvements not otherwise permitted by this Ordinance; provided, however, that stormwater management ponds shall not be allowed in floodplains in watersheds of greater than 640 acres, except as provided in paragraph (E), below.

(E) Those roads, as permitted under the provisions of the Zoning Ordinance and Land Subdivision and Development Ordinance, and ponds in the Potomac River floodplain. Due to the extensive watershed drained by the Potomac River in the States of Virginia, Maryland, and Pennsylvania, the Potomac River floodplain is unique in comparison to all other floodplains in Loudoun County. The Potomac River floodplain located in Loudoun County does not represent a significant portion of the entire Potomac floodplain, and accordingly, these less restrictive use regulations will apply to that area.

(F) Incidental structures, greater than 840 square feet of floor area, associated with uses permitted by right or special exception in the Floodplain Overlay District.

4-1507

Standards For A Special Exception. In considering applications for a special exception, the Board of Supervisors must be satisfied that the following standards and those of Section 6-1300 have been met:

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- 1 (A) The proposed use will not increase the danger to life and property due to
2 increased flood heights or velocities.
3
4 (B) The proposed use will not increase the danger that materials may be
5 swept downstream to the injury of others.
6
7 (C) The proposed water supply and sanitation systems are designed to
8 prevent disease, contamination, and unsanitary conditions.
9
10 (D) The proposed use or structure must be located and designed to limit its
11 susceptibility to flood damage, and available alternative locations, not
12 subject to flooding, for the proposed use must be considered.
13
14 (E) The proposed use is compatible with existing and planned development.
15
16 (F) The proposed use is in harmony with the comprehensive plan.
17
18 (G) The expected heights, velocity, duration, rate of rise and sediment
19 transport of the flood waters expected at the site should not cause
20 significant damage.
21

22 **4-1508**

Alterations.

- 23
24 (A) **Procedures for Alterations to the Floodplain.** Applications for
25 alterations to the floodplain shall be subject to the following procedures:
26
27 (1) A Type I floodplain alteration application shall be submitted
28 concurrently with Construction Plans and Profiles,
29 preliminary/record plat, record plat, final site plan, or
30 subdivision waiver applications. A Type II floodplain alteration
31 application shall be submitted after preliminary subdivision or
32 preliminary site plan approval. Approval of floodplain
33 alteration applications will be required prior to approval of
34 construction plans and profiles, record plats, or final site plans,
35 whichever comes first.
36
37 (2) The applicant shall submit to the Zoning Administrator detailed
38 studies in accordance with Section 5.400 of the Facilities
39 Standards Manual.
40
41 (3) The Zoning Administrator shall refer the submitted studies to
42 the appropriate agencies for review and recommendations based
43 on Subsection 4-1508(B), below. The Zoning Administrator

1 shall notify the Virginia Water Control Board and the Federal
2 Emergency Management Agency and any adjacent community
3 which may be impacted prior to the approval of any alteration or
4 relocation of a watercourse that is designated as a FEMA
5 floodplain or floodway.

- 6
7 (4) Following review of the application, the Zoning Administrator
8 shall approve or disapprove the application and notify the
9 applicant.

10
11 (B) **Engineering and Environmental Criteria for Proposed Alterations to**
12 **the Floodplain.** All proposed alterations to the floodplain shall be
13 reviewed by the Zoning Administrator, in consultation with appropriate
14 agencies, to determine whether the following criteria have been met:

- 15
16 (1) Alterations to the floodplain shall result in no off-site increase in
17 the water surface elevation of the base flood, except as
18 otherwise provided for in Section 4-1505(A)(12). Alterations in
19 the floodway shall result in no rise in the water surface elevation
20 of the base floodplain consisting of the water channel and
21 overbank areas capable of conveying the deep and fast moving
22 water discharge of the base flood as defined in the Federal
23 Emergency Management Agency Flood Insurance study.
- 24
25 (2) Alterations to the floodplain shall not create erosive water
26 velocity on or off-site (where erosive water velocity is based on
27 analysis of the surface material and permissible velocities for
28 specific cross sections affected by the proposed alteration, using
29 standard engineering tables as a general guide), and the mean
30 velocity of stream flow at the downstream end of the site after
31 alteration shall be no greater than the mean velocity of the
32 stream flow under existing conditions.
- 33
34 (3) Relocation or alteration of the natural stream channel shall not
35 be permitted on streams that drain greater than 640 acres.
36 Relocation or alteration proposals for streams that drain less
37 than 640 acres shall include a stream rehabilitation program
38 depicted on a floodplain alteration plan.
- 39
40 (4) The maximum allowable slope of any filled area on the
41 floodplain alteration plan shall be 2:1.

- 1 (5) The floodplain alteration plan shall further include plans for
2 erosion control of cut and fill slopes and restoration of
3 excavated areas. The site plan should incorporate the use of
4 natural materials (earth, stone, wood) on cut and fill slopes and
5 provide for tree protection.
6
7 (6) Alterations to the floodplain shall be in conformance with the
8 provisions of Chapter 1220 of the Codified Ordinances of
9 Loudoun County and the Erosion and Sediment Control Law,
10 Va. Code Section 21-89.1 et seq.
11
12 (7) The flood carrying capacity within the altered floodplain shall
13 be maintained.
14

15 **4-1509 Grading Plans and Construction Plans and Profiles Required.**
16

- 17 (A) Grading plans and/or construction plans and profiles are required for all
18 uses in the floodplain overlay district, except for agricultural, forestry or
19 fisheries uses not requiring the erection of structures. Alterations may be
20 approved as part of either a subdivision or site plan application, or
21 grading plan.
22
23 (B) All structures built in the Floodplain Overlay District must conform to
24 the requirements of the Uniform Statewide Building Code, including the
25 floodproofing provisions of that code.
26

27 **4-1510 Floodplain Information To Be Submitted With Land Development Actions.**
28 Floodplain information shall be included as part of rezoning, special exception,
29 commission permit and site plan applications, and other land development
30 applications, in accordance with Chapter 5 of the Facilities Standards Manual.
31

32 **4-1511 Density Calculations.** For purposes of calculating the permitted floor area and
33 number of residential units in the underlying zoning district, the land area in any
34 portion of the Floodplain Overlay District shall be treated as follows:
35

- 36 (A) Any portion of the Floodplain Overlay District in a watershed of a stream
37 draining less than 640 acres shall be included as part of the land area for
38 such calculations.
39
40 (B) Except to the extent permitted in approved County Flood Plain Studies,
41 any portion of the regulatory floodplain within the Floodplain Overlay
42 District in a watershed of 640 or more acres shall be excluded as part of
43 the land area for such calculations.
44

1 ~~Section 4-1900 — Limestone Conglomerate Overlay District (LOD)~~

2
3 ~~4-1901 — Purpose and Intent.~~ A large area just east of the Catoctin Mountain
4 range in the Rural Policy Area of Loudoun County is comprised of
5 limestone and “Karst terrain” areas. The limestone geology of
6 carbonate deposits is dissolved over time by mildly acidic
7 precipitation, creating fissures. The deposits are highly permeable,
8 allowing surface water to pass through quickly to underlying aquifers
9 and groundwater, and to reappear elsewhere as springs. The terrain is
10 also characterized by the presence of certain natural features, such as
11 sinkholes and rock outcrops. Thus, development on Karst terrain has a
12 direct correlation to the potential for collapse and ground slippage and
13 the susceptibility of groundwater and surface water pollution, and
14 spring contamination, posing serious risks to public health, safety, and
15 welfare. The provisions of this Section 4-1900 are intended to regulate
16 land use and development in areas underlain by limestone and in areas
17 with Karst features and Karst terrain in such a manner so as to:

- 18 (A) ~~Protect groundwater and surface water resources from~~
19 ~~contamination;~~
- 20 (B) ~~Reduce potential for property damage resulting from~~
21 ~~subsidence or other earth movement; and~~
- 22 (C) ~~Protect the health, safety, and welfare of the public.~~

23 ~~4-1902 — Authority.~~ Authority for these provisions includes:

- 24 (A) ~~Chapter 11, Title 15.2, Code of Virginia (Planning,~~
25 ~~Subdivision of Land and Zoning).~~
- 26 (B) ~~Soil Conservation Districts Law, Va. Code Sections 21-2(e),~~
27 ~~21-2(d).~~
- 28 (C) ~~Virginia Environmental Quality Act, Va. Code Section 10-~~
29 ~~178.~~
- 30 (D) ~~Erosion and Sediment Control Act, Va. Code Section 21-~~
31 ~~89.2.~~

32 ~~4-1903 — Applicability and Exemptions.~~

- 33 (A) ~~Applicability — Land Area and Features Included in the~~
34 ~~LOD.~~ This Section 4-1900 shall apply to all land area and
35 karst features included in the Limestone Conglomerate
36 Overlay District (LOD), as shown on the official Limestone
37 Conglomerate Overlay District Map of Loudoun County

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1 ("LOD Map"), which with all explanatory matter thereon, is
2 hereby incorporated by reference.

3 (1) ~~The LOD Map delineates the following features:~~

4 (a) ~~The extent of the limestone bedrock~~
5 ~~formations;~~

6 (b) ~~Sinkholes; and~~

7 (c) ~~Rock outcrops.~~

8 (2) ~~The LOD Map does not delineate required buffers~~
9 ~~around karst features. (See Section 4 1905 below.)~~

10 (B) ~~Applicability Covered Activities.~~ This Section shall
11 apply to all proposed land disturbing activities, including
12 non-agricultural rural economy uses, new single family
13 development, and subdivision, that occurs within the LOD.
14 Expansion, alteration, or reconstruction of legally existing
15 buildings, structures, and impervious surface areas existing
16 on January 7, 2003 shall not be covered, provided that such
17 alteration does not increase the total footprint of a structure
18 or impervious surface by more than twenty five percent
19 (25%) or 2,000 square feet, whichever is greater.

20
21 (C) ~~Exemptions.~~ The following land disturbing activities shall
22 be allowed within the LOD, subject to the specific limits set
23 forth below:

24 (1) ~~Agricultural Operations.~~ This section shall not
25 apply to agricultural operations located in the LOD
26 that are covered by a Conservation Farm
27 Management Plan, approved by the Loudoun
28 County Soil and Water Conservation District or the
29 U.S. Natural Resources and Conservation Service
30 that includes best management practices, and a
31 Nutrient Management Plan (where applicable).
32 Structures associated with agricultural operations
33 are not exempt from these provisions.

34 (2) ~~Existing Legal Lots within Sensitive Limestone~~
35 ~~Areas.~~ Following a Geotechnical or Geophysical
36 study, a legal lot of record, which lot was: (a) in
37 existence on January 7, 2003; and (b) contains in
38 whole or in part a sensitive environmental resource
39 associated with limestone bedrock area established
40 by Section 4 1905, below, may be developed for a

1 single-family detached dwelling and permitted
2 accessory structures. To the maximum extent
3 feasible, no development shall take place within
4 karst feature buffers, but where residential
5 development takes place, such dwelling shall be
6 sited on the lot as far from any karst feature as
7 possible, and shall comply with the development
8 standards in this section to the maximum extent
9 feasible. Development on such lot shall not be
10 allowed if subsidence poses a serious risk to public
11 health or safety or to the safety of residents or users
12 of the proposed development, as determined by the
13 County

14 **4-1904 — Review Procedures.** All development approvals, review procedures,
15 modifications, and density calculations in the LOD are governed by
16 Article VI, "Development Process and Administration," as applicable,
17 and procedures in Chapter 8 of the Facilities Standards Manual (FSM).

18 **4-1905 — Establishment of Sensitive Limestone Areas.**

19 (A) ~~Sensitive Environmental Resources Associated with~~
20 ~~Limestone Bedrock.~~ For all development applications
21 involving properties subject to LOD as identified on the LOD
22 Map, or by an approved Preliminary Soils Review, the
23 applicant shall submit a Geotechnical or Geophysical Study
24 in accordance with standards set forth in the Facilities
25 Standards Manual, Chapter 6. Such Geotechnical or
26 Geophysical Study shall identify the following sensitive
27 environmental resources associated with limestone bedrock:

- 28 (1) Closed depressions;
- 29 (2) Open sinkholes;
- 30 (3) Rock outcrops;
- 31 (4) Seasonal high water table indicators;
- 32 (5) Surface drainage into ground;
- 33 (6) Faults;
- 34 (7) Other hazardous subsidence conditions;
- 35 (8) Underground solution channels; and

(9) ~~Other underground features that may affect the proposed development.~~

(10) ~~Cave openings~~

~~If conditions warrant mitigation to protect sensitive environmental resources associated with limestone bedrock, then the study shall propose mitigation measures to be undertaken. Avoidance of sensitive environmental resources associated with limestone bedrock and of karst features shall be the preferred mitigation measure.~~

(B) ~~**Karst Feature Buffers.** For each karst feature identified on the LOD Map or by an approved Preliminary Soils Review, or the required Geotechnical/Geophysical Study, a Karst Feature Buffer shall be established from the outermost edge of the feature. The minimum Karst Feature Buffer width shall be:~~

(1) ~~Fifty (50) feet from any rock outcrop;~~

(2) ~~One hundred (100) feet from the rim of any sinkhole; and~~

(3) ~~One hundred (100) feet from any cave opening.~~

~~4-1906~~ **Permitted Uses and Activities.**

(A) ~~**Uses and Activities within Karst Feature Buffers.**~~

(1) ~~Land disturbing activities, development, and impervious surface coverage are prohibited within Karst Feature Buffers, except for the following:~~

(a) ~~Fences that do not obstruct surface water flow;~~

(b) ~~Trails and other passive recreation facilities, excluding buildings, for pedestrian, bike or other non motorized use, provided that such facility is designed with permeable materials and is located a minimum of 25 feet from the edge of a karst feature; and~~

(c) ~~Restoration and revegetation.~~

(2) ~~Residential structures shall be located outside Karst Feature Buffers, unless there are no feasible~~

development sites available outside the buffers. Residential structures located within a Karst feature shall be sited on the lot as far away from the Karst feature to the maximum extent feasible.

~~(B) — Uses and Activities in the Limestone Conglomerate Overlay District, Outside Karst Feature Buffers. All uses and structures permitted by right in the underlying zoning district are permitted within the Limestone Conglomerate Overlay District outside of Karst Feature Buffers, subject to the standards and mitigation measures in this Section and Zoning Ordinance.~~

~~4-1907 — Special Exception Uses. All uses and structures permitted by special exception in the underlying zoning district may be permitted subject to the procedures and criteria stated in Section 6-1300, "Special Exception," of the Zoning Ordinance, to conditions identified in a grading permit application, when required, and to any mitigation measures required according to Section 4-1909, below~~

~~4-1908 — Development Standards for the LOD. Unless otherwise exempt by Section 4-1903(C) above, all land disturbing activities permitted by right or special exception in the LOD shall adhere to the following development standards:~~

~~(A) — Structures in Potential Subsidence Areas. No structure shall be built in an area where a Geotechnical or Geophysical Study indicates that potential subsidence may occur that would cause physical injury or harm to the public or future residents unless such a study indicates that such potential harm can be mitigated.~~

~~(B) — Site Grading. To the maximum extent feasible, site grading shall maintain natural drainages. If not feasible, then drainage shall be designed to avoid damage to sensitive environmental resources associated with limestone bedrock as identified in the required Geotechnical or Geophysical study.~~

~~(C) — Surface Water Run-Off.~~

~~(1) — Non point source pollution load of nutrients and sediment shall not exceed the standards specified in Chapter 5 of the Facilities Standards Manual.~~

~~(2) — Surface water run off shall not be redirected to enter a sinkhole or closed depression. Drainage plans shall be designed to route surface water run-~~

1 off through vegetative filters or other filtration
2 measures before it enters such features, and to
3 protect neighboring properties from runoff on the
4 subject property.

5 (D) ~~Revegetation.~~ Disturbed areas not covered by paving, stone,
6 or other solid materials shall be revegetated with native plant
7 species that are compatible with the natural vegetation and
8 tree cover and that have low water and nutrient requirements.

9 (E) ~~Application of Wastewater Sludge.~~ Application of
10 wastewater sludge shall be subject to the requirements of a
11 nutrient management plan acceptable to the County pursuant
12 to provisions contained in the Loudoun County Codified
13 Ordinances

14 (F) ~~Communal Water and Wells.~~ Wells shall be installed in
15 accordance with the provisions in Chapter 6 (proposed) of the
16 Facilities Standards Manual, relating to "Subdivisions with
17 Communal Water Systems," and "Subdivisions with
18 Individual Wells." In addition to well protection standards in
19 the FSM, structures and septic systems shall be located a
20 minimum distance of 100 feet from all existing and proposed
21 wells, both on and off site.

22 (G) ~~On-Site Sewage Disposal Systems.~~ On site sewage disposal
23 systems, as currently defined in the Land Subdivision
24 Development Ordinance, are allowed for individual lots and
25 subdivisions with fewer than eight (8) lots in the LOD.
26 Sewage disposal systems shall be subject to the review
27 processes and requirements in the existing LSDO (Section
28 1245.10) and shall comply with requirements of the State of
29 Virginia Department of Health Division of Sewage and
30 Water Services, the Loudoun County Sanitation Authority
31 regulations, the Loudoun County Health Department, and the
32 following:

33 (1) ~~Within the LOD, in areas that the Director of the~~
34 ~~Loudoun County Health Department deems~~
35 ~~appropriate for sewage disposal systems, the~~
36 ~~applicant shall only use a sewage disposal system~~
37 ~~that is at least 90% effective in removing nitrogens.~~

38 (2) ~~For existing and new systems, owners shall submit~~
39 ~~evidence of pumping, inspection, and any necessary~~
40 ~~repairs and maintenance every three years. The~~
41 ~~applicant shall submit evidence of current~~

inspection and maintenance before expansion or conversion of a land use.

(H) ~~Communal Wastewater Systems.~~ Proposed subdivisions containing eight (8) or more lots shall be served by communal wastewater systems, unless the applicant demonstrates to the County that other types of systems are available that will achieve the same or superior treatment results. The County shall allow communal wastewater systems in the LOD subject to the following standards:

(1) ~~Where sufficient buildable land area exists on the portion of a property outside the LOD to accommodate a proposed communal wastewater disposal system, that area shall be used before any land within the LOD shall be used; or~~

(2) ~~Where insufficient buildable land area exists outside of the LOD, as much of the proposed communal wastewater disposal system shall be sited outside the LOD as possible.~~

(3) ~~Where any portion of a proposed communal wastewater disposal system is to be located within the LOD the applicant shall demonstrate through a Geophysical Study acceptable to the County that the communal wastewater disposal system will minimize run off generated, enhance filtration, and will not have an adverse environmental impact on underlying aquifers and groundwater. In addition, the applicant shall provide a plan for regular operation and maintenance.~~

(I) ~~Protection of Springs.~~ Land disturbing activities, development, and impervious surface coverage are prohibited within one hundred (100) feet from a spring, measured from the vertical source of a spring on flat terrain or from the first emergence of a spring on any steep slope (15% or greater).

(J) ~~Stormwater Management Ponds.~~

(1) ~~To the maximum extent feasible, stormwater management ponds shall not be located within areas containing open sinkholes and closed depressions.~~

(2) ~~Stormwater management ponds constructed within the LOD shall be lined with impervious materials to~~

1 prevent groundwater pollution, in accordance with
2 Chapter 5 of the Facilities Standards Manual.

3 ~~(K) — Warnings to Property Owners.~~ A note shall be placed on
4 any record subdivision plat for land in the LOD, containing
5 the following, or similar, language: “Household lawn
6 fertilizers, herbicides, and pesticides for residential purposes
7 should be limited due to the underlying geology of this
8 property, and the potential for groundwater contamination.
9 Application of fertilizers and lime is allowed within the
10 Limestone Conglomerate Overlay District but should only be
11 applied based on results of a soil test obtained through the
12 Virginia Tech extension service or other County approved
13 laboratory.

14 ~~4-1909 — Mitigation Measures for the LOD.~~ In addition to compliance with
15 the development standards in Section 4-1908, land disturbing activities
16 shall employ one or more measures as necessary to mitigate any
17 potential adverse impacts to the County’s subsurface water resources
18 or sensitive environmental resources associated with limestone
19 bedrock, as identified in a preliminary soils review, required
20 Geotechnical or Geophysical Study as set forth in Section 4-1905(A);
21 or other hydrogeologic or environmental analysis;

22 ~~(A) — General.~~ Mitigation measures shall be directly related to the
23 proposed land disturbing activity and its potential adverse
24 impact on karst features or sensitive environmental resources
25 associated with limestone bedrock identified on the subject
26 property.

27 ~~(B) — Mitigation Measures.~~ If warranted by a study required by
28 this Zoning Ordinance, the County shall require measures to
29 mitigate the identified potential adverse impacts, including
30 but not limited to the following:

31 ~~(1) — Ineligibility for Density Increases.~~ The applicant
32 may not be eligible for any density increases
33 permitted under the clustering provisions of this
34 Ordinance.

35 ~~(2) — Use of a Cluster Subdivision.~~ Where not
36 otherwise required by this Ordinance, the County
37 may require cluster development.

38 ~~(3) — Landscaping and Reductions in Impervious~~
39 ~~Surface Coverage.~~ The County may require:

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- ~~(a) Reductions in the maximum impervious surface coverage allowed;~~
- ~~(b) Reductions in the area devoted to landscaped lawns, and~~
- ~~(c) the use of xeriscape (i.e., use of native plant materials and landscape materials that have lower water and nutrient requirements).~~

~~(4) **Prohibition of Specific Pollution Sources.** The County may prohibit specific pollution sources, as defined in Chapter 5 of the Facilities Standards Manual if the applicant does not propose effective mitigation measures acceptable to the County, provide evidence that pollution sources will be properly monitored, and that they will adhere to facility design standards.~~

- ~~(a) The County may prohibit the following pollution sources, including, but not limited to:
 - ~~(i) Uses and activities involving hazardous substances;~~
 - ~~(ii) Uses and activities involving the application of high nitrate herbicides or pesticides;~~
 - ~~(iii) Automobile service stations;~~
 - ~~(iv) Underground storage tanks;~~
 - ~~(v) Landfills and waste sites; and~~
 - ~~(vi) Other uses and activities with high risk of releasing pollutants.~~~~

~~(5) **Storage Tanks.** The County may require leak testing and secondary containment of storage tanks.~~

~~(6) **Conservation of Indigenous Vegetation.** The County may require retention of indigenous vegetation to the maximum extent feasible, and in accordance with Tree Conservation Standards in Chapter 7 of the Facilities Standards Manual.~~

~~(7) **Groundwater Monitoring.** The County may require the applicant to establish a regular system of groundwater monitoring by a qualified professional for the proposed development.~~

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1 ~~Section 4-2000 River and Stream Corridor Overlay District (RSCOD)~~

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3 ~~4-2001 Purpose and Intent.~~ These provisions are intended to promote, preserve, and
4 enhance the important hydrologic, biological, ecological, aesthetic, recreational,
5 and educational functions that river and stream corridors provide. Specifically,
6 the provisions are intended to:

7 (A) ~~Protect life and prevent or minimize property damage from soil erosion~~
8 ~~and flooding; and reduce public costs for flood control, rescue, and relief~~
9 ~~efforts occasioned by unwise use or occupancy of floodplains;~~

10 (B) ~~Comply with federal and state laws and regulations that address the need~~
11 ~~for floodplain management and protection;~~

12 (C) ~~Qualify Loudoun County residents for the insurance and subsidies~~
13 ~~provided by the National Flood Insurance Program;~~

14 (D) ~~Conserve the natural state of watercourses and stream banks to enable a~~
15 ~~dynamic and healthy river and stream corridor ecosystem;~~

16 (E) ~~Maintain water quality and minimize or remove pollutants delivered in~~
17 ~~stormwater through the natural capacity of riparian areas to filter and~~
18 ~~purify run off;~~

19 (F) ~~Protect against the damages of soil erosion and flooding;~~

20 (G) ~~Reduce water treatment cost;~~

21 (H) ~~Maintain and provide a riparian canopy to shade streams and promote~~
22 ~~desirable aquatic organisms and fish habitats;~~

23 (I) ~~Conserve wildlife habitat and corridors;~~

24 (J) ~~Perpetuate biological diversity and natural resource management to~~
25 ~~provide educational and recreational value;~~

26 (K) ~~Protect and preserve functioning forest cover and riparian forest buffers~~
27 ~~for their biological and hydrological benefits;~~

28 (L) ~~Protect wetlands;~~

29 (M) ~~Preserve and protect Loudoun County's historic and prehistoric heritage in~~
30 ~~the form of archeological sites; and~~

31 (N) ~~Protect the scenic value of the rivers and streams of Loudoun County.~~

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33 ~~4-2002 Authority.~~ Authority for these provisions includes:

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- 1 (A) ~~Flood Damage Reduction Act, Va. Code Sections 62.1-44.108 et seq.~~
- 2 (B) ~~Chapter 11, Title 15.2, Code of Virginia (Planning, Subdivision of Land~~
- 3 ~~and Zoning).~~
- 4 (C) ~~Soil Conservation Districts Law, Va. Code Sections 21-2(c), 21-2(d).~~
- 5 (D) ~~Virginia Environmental Quality Act, Va. Code Section 10-178.~~
- 6 (E) ~~Erosion and Sediment Control Act, Va. Code Section 21-89.2.~~
- 7 (F) ~~Potomac River Basin Compact, Va. Code Section 62.1-69.1.~~
- 8 (G) ~~National Flood Insurance Act of 1968, 42 U.S.C. 4001 et seq.~~
- 9 (H) ~~Section 10.1-2100 et seq. (The Chesapeake Bay Preservation Act) and~~
- 10 ~~Section 15.1-489, of the Code of Virginia.~~

11 **4-2003 Applicability and Exemptions.**

- 12 (A) ~~**Applicability—Land Area & Features Included in the RSCOD.** This~~
- 13 ~~Section 4-2000 shall apply to all land areas and natural features within the~~
- 14 ~~River and Stream Corridor Overlay District (RSCOD), as shown on the~~
- 15 ~~official River and Stream Corridor Overlay District Map of Loudoun~~
- 16 ~~County (“RSCOD Map”), which with all explanatory matter thereon, is~~
- 17 ~~hereby incorporated by reference. The description of the Protected River~~
- 18 ~~and Stream Corridors (“Protected Corridors”) in RSCOD is set forth in~~
- 19 ~~Section 4-2005, “Establishment of Protected Corridors.” (Note: Map~~
- 20 ~~sources are listed on RSCOD Map.)~~
- 21 (B) ~~**Applicability—Covered Activities.** This Section 4-2000 shall apply to~~
- 22 ~~all proposed land disturbing activity, including new single family~~
- 23 ~~development and subdivision that occurs within the RSCOD Protected~~
- 24 ~~River and Stream Corridors (“Protected Corridors”). This Section shall~~
- 25 ~~not apply to the expansion, alteration, or reconstruction of legally existing~~
- 26 ~~buildings, structures, and impervious surface areas existing on January 7,~~
- 27 ~~2003, provided that such alteration does not increase the total footprint of~~
- 28 ~~a structure or impervious surface by more than twenty five percent (25%)~~
- 29 ~~or 2000 square feet whichever is greater.~~
- 30 (C) ~~**Exemptions.** The following land disturbing activities are exempt from~~
- 31 ~~this Section 4-2000’s requirements, subject to the specific limits set forth~~
- 32 ~~below:~~
- 33 (1) ~~**Agricultural Operations.** This section shall not apply to~~
- 34 ~~agricultural operations located in the Protected Corridor that are~~
- 35 ~~covered by a Conservation Farm Management Plan, approved by~~
- 36 ~~the Loudoun County Soil and Water Conservation District or the~~

U.S. Natural Resources and Conservation Service that includes best management practices. Structures associated with agricultural operations are not exempt from these provisions.

(2) ~~Existing Legal Lots within the Protected Corridor.~~ A legal lot of record (a) in existence on January 7, 2003; and (b) located in whole or in part within the Protected Corridor, may be developed for a single family detached dwelling use and accessory structures, provided such dwellings and structures are located outside of the 100 year floodplain. This exemption shall not apply to non-residential uses. Such dwelling and accessory structures shall be sited on the lot as far from the stream bank as feasible.

(3) ~~Man-Made Drainage Channels, Ditches, and Similar Structures.~~ Standards set forth in Section 4 2005, "Establishment of Protected Corridors," shall not apply to man made drainage channels, ditches, and similar structures. However, all other relevant development standards set forth in Section 4 2008 shall apply.

(D) ~~Zone District Development and Dimensional Standard Flexibility Provisions.~~ When twenty five percent (25%) or more of the total area of a parcel or lot is subject to RSCOD restrictions (excluding any management buffer), the following modifications of development and dimensional standards shall be applicable for the purposes of accommodating the density/intensity of development allowed in the underlying zoning district, unless the underlying zoning requires less restrictive standards:

(1) ~~Minimum Lot Size:~~ No minimum.

(2) ~~Minimum Lot Width:~~ No minimum.

(3) ~~Minimum Yards:~~

(a) ~~Residential:~~ No minimum

(b) ~~Nonresidential:~~

(i) ~~Front:~~ 15 feet

(ii) ~~Side:~~ 9 feet

(iii) ~~Rear:~~ 15 feet

(4) ~~Height.~~ 45 feet (residential); 55 feet, without additional setbacks being required (nonresidential)

1 ~~(5) **Parking (nonresidential only).** Twenty five percent (25%)~~
2 ~~reduction in the required off street parking space requirement as~~
3 ~~set forth in Section 5 1002.~~

4 ~~(6) **Buffering and Screening.** To the extent necessary to~~
5 ~~accommodate the density/intensity of development allowed in the~~
6 ~~underlying zoning district, the Zoning Administrator may waive or~~
7 ~~reduce the buffer yard requirements set forth in Section 5 1400~~
8 ~~upon a showing that the building and/or yard has been designed to~~
9 ~~minimize adverse impact through a combination of architectural,~~
10 ~~landscape, and/or other design techniques.~~

11
12
13 ~~**4-2004 Review Procedures.** All development approvals, review procedures,~~
14 ~~modifications, and density calculations in the RSCOD are governed by Article VI,~~
15 ~~"Development Process and Administration," as applicable, and procedures in~~
16 ~~Chapter 8 of the Facilities Standards Manual.~~

17 ~~**4-2005 Establishment of Protected Corridors.**~~

18 ~~(A) **General Rule Protected Corridors along Streams and Rivers.**~~

19 ~~(1) **Minimum Protected Corridor Width.** Except for those waters~~
20 ~~listed under section 4 2005(B)(1) below, for all stream and river~~
21 ~~segments draining 100 acres or more and shown on the RSCOD~~
22 ~~Map, the Protected Corridor shall be the greater of (1)(a) or (1)(b)~~
23 ~~below:~~

24 ~~(a) The cumulative width of the following:~~

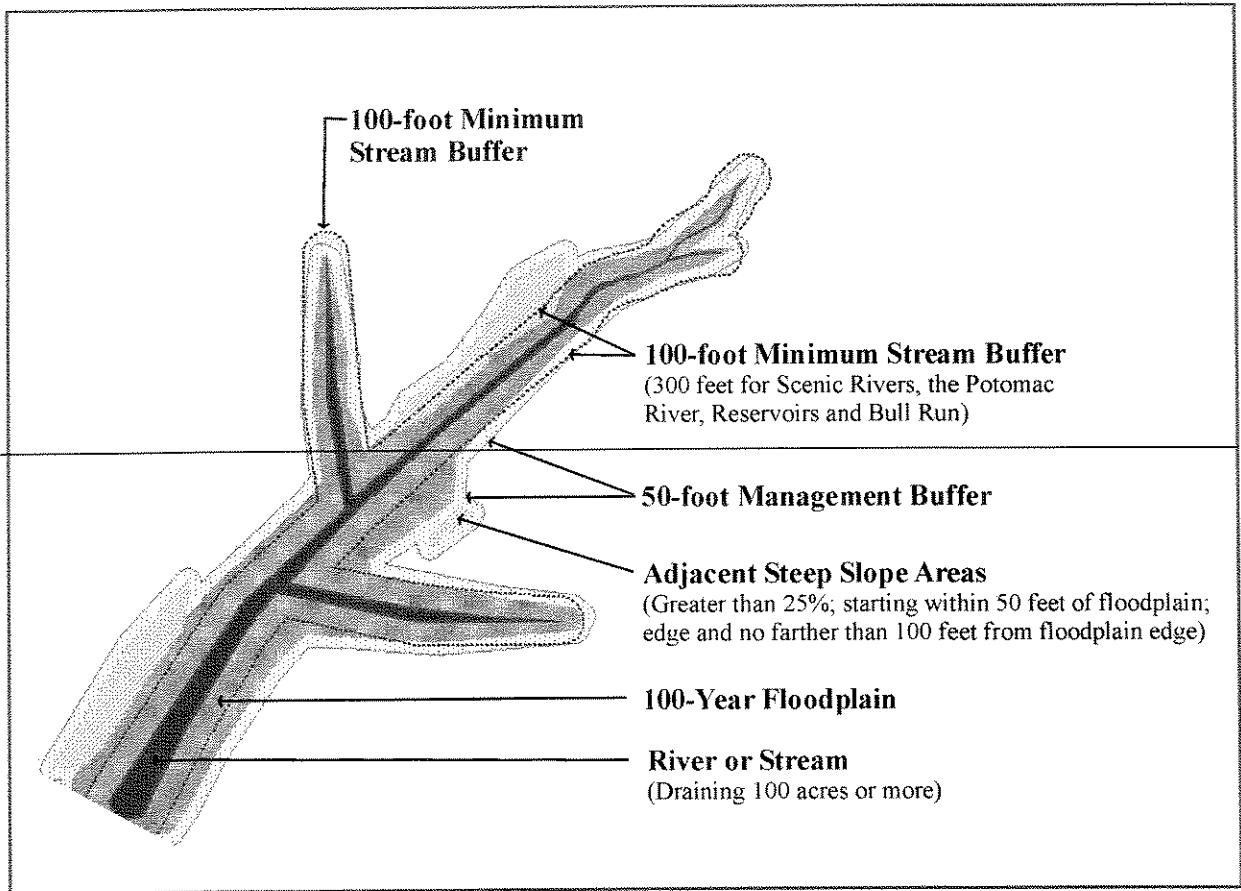
25 ~~(i) The 100 year floodplain, and~~

26 ~~(ii) Adjacent very steep slopes (greater than 25%)~~
27 ~~starting within 50 feet of the edge of the 100 year~~
28 ~~floodplain and extending no greater than 100~~
29 ~~horizontal feet beyond the edge of the 100 year~~
30 ~~floodplain, and~~

31 ~~(iii) A 50 foot Management Buffer measured from the~~
32 ~~edge of the 100 year floodplain in (a)(i) above or~~
33 ~~when adjacent very steep slopes are present, from~~
34 ~~the very steep slope areas in (a)(ii) above.~~

35 ~~OR~~

36 ~~(b) A minimum stream buffer measured as the area located~~
37 ~~within 100 feet of both sides of the stream or river,~~
38 ~~measured as a line extending perpendicularly from the~~
39 ~~stream bank of the active channel of the stream or river.~~



Protected River and Stream Corridor ("Protected Corridor") Diagram

(B) Protected Corridors Along Specific Rivers/Streams and Water Supply Reservoirs

(1) Minimum Protected Corridor Width. For the following specific rivers and streams and water supply reservoirs, the Protected Corridor shall be the greater of the Protected Corridor width required by Subsection 4-2005(A), "General Rule Protected Corridors along Streams and Rivers," above, or the area located within three hundred (300) feet from:

- (a) The defined stream bank of the Potomac River;
- (b) The defined stream bank of Bull Run;
- (c) The stream bank of the active channel for any state scenic rivers, including but not limited to Goose Creek, Catoctin Creek; and
- (d) The projected shoreline of any drinking water supply reservoir, as denoted on the RSCOD map.

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1 ~~4-2006 Permitted Uses and Activities.~~

2 ~~(A) General. Only those uses and activities set forth in this subsection shall~~
3 ~~be permitted by right or special exception within a Protected Corridor, and~~
4 ~~land so encumbered may be used in a manner permitted in the underlying~~
5 ~~district only if and to the extent such use is also permitted in the overlay~~
6 ~~district.~~

7 ~~(B) Permitted Uses. The following uses shall be permitted in a Protected~~
8 ~~Corridor, subject to development standards in this section:~~

9 ~~(1) Roads, railroad tracks, bridges, paths and trails, and below ground~~
10 ~~utilities when any such facilities cross a stream or river;~~

11 ~~(2) Paths and trails, including footpaths, bicycling or hiking paths, and~~
12 ~~horse trails constructed of permeable materials;~~

13 ~~(3) Stormwater management facilities that do not alter a river or~~
14 ~~stream channel;~~

15 ~~(4) Sanitary sewer pipelines;~~

16 ~~(5) Lakes, ponds, and water supply reservoirs;~~

17 ~~(6) Historic sites, structures, archaeological sites, and~~
18 ~~restoration/recovery activities;~~

19 ~~(7) Passive recreation, limited to hiking, non motorized biking,~~
20 ~~horseback riding, picnicking, camping, climbing, hunting, fishing,~~
21 ~~and wildlife viewing;~~

22 ~~(8) Active recreation on the waters only, limited to swimming and~~
23 ~~non powered boating with public points of entry identified and~~
24 ~~approved by the County;~~

25 ~~(9) Silviculture, as defined in the Zoning Ordinance;~~

26 ~~(10) Wildlife and fisheries management projects that are consistent with~~
27 ~~the purposes of the Federal Endangered Species Act or consistent~~
28 ~~with the regulations, policies, and habitat programs of the~~
29 ~~Commonwealth of Virginia;~~

30 ~~(11) Conservation and educational activities, including but not limited~~
31 ~~to Adopt a Stream and Keep Loudoun Beautiful programs,~~
32 ~~teaching visits, and scientific study of nature, historic sites, and~~
33 ~~archaeological sites;~~

34 ~~(12) Stream and riparian restoration projects;~~

(13) ~~Wetlands mitigation banking; and~~

(14) ~~Water quality monitoring and stream gauging.~~

4-2007 Special Exception Uses.

(A) ~~General.~~ The following uses may be permitted in a Protected Corridor by special exception, subject to the procedures and criteria stated in Section 4-2008, "Development Standards," and Section 6-1300, "Special Exception."

(1) ~~Marinas or boat launches for non-powered boats, boat rental entry points, docks and piers; and~~

(2) ~~Above ground structures or uses required for the operation of a public utility, such as intake and outfall structures of power plants, sewage treatment plants, water treatment plants, and substations.~~

(B) ~~Additional Criteria for a Special Exception Use.~~ In considering applications for a special exception, the Board of Supervisors shall find that the following standards, in addition to those of Section 6-1300, "Special Exception," have been met:

(1) ~~The proposed use will not increase the danger to life and property due to increased flood heights or velocities.~~

(2) ~~The proposed use will not increase the danger that materials may be swept downstream to the injury of others.~~

(3) ~~The proposed water supply and sanitation systems are designed to prevent disease, contamination, and unsanitary conditions.~~

(4) ~~The proposed use or structure must be located and designed to limit its susceptibility to flood damage, and alternative locations that are not subject to flooding must be considered.~~

(5) ~~The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters expected at the site shall not cause significant damage, nor increase erosion downstream due to increased flood heights or velocities.~~

(6) ~~The proposed use will not adversely affect water quality or impair the function or chemical, physical, biological, and ecological integrity of the stream or river corridor.~~

4-2008 Development Standards. ~~All development and land disturbing activities permitted by right or special exception in the RSCOD Protected Corridor shall adhere to the following development standards:~~

1 ~~(A) General. To the maximum extent feasible, all uses and activities shall~~
2 ~~minimize land disturbance in the Protected Corridor.~~

3 ~~(1) Preferred Development Sites. Preferred development sites for~~
4 ~~permitted uses and activities set forth in Section 4 2006 and special~~
5 ~~exception uses set forth in Section 4 2007 are those that:~~

6 ~~(a) Avoid all parts of the Protected Corridor except to the~~
7 ~~extent that the Management Buffer is reduced or eliminated~~
8 ~~pursuant to Section 4 2009, "Permitted Reductions in~~
9 ~~Protected Corridor Width;"~~

10 ~~(b) Do not impair, interrupt, or fragment the functioning of the~~
11 ~~river and stream ecology; and protect the safety of residents~~
12 ~~and their property.~~

13 ~~(2) Restoration/Mitigation of Disturbance.~~

14 ~~(a) Disturbance During Development. All areas~~
15 ~~disturbed during development in the Protected~~
16 ~~Corridor shall be restored to preexisting conditions~~
17 ~~by the applicant to the maximum extent feasible.~~
18 ~~Where restoration will not be feasible, then the~~
19 ~~applicant shall mitigate any disturbance of the~~
20 ~~Protected Corridor that exceeds 10,000 square feet~~
21 ~~in area by providing mitigation in other areas in the~~
22 ~~Protected in the form of:~~

23 ~~(i) Providing riparian buffer pursuant to~~
24 ~~Chapter 7 of the FSM, either on the~~
25 ~~development site or off site; or~~

26 ~~(ii) Enhanced BMPs pursuant to Chapter 5 of~~
27 ~~the FSM, either on the development site or~~
28 ~~off site; or~~

29 ~~(iii) Stabilization of off site stream banks; or~~

30 ~~(iv) Off site vegetation restoration of erosion~~
31 ~~that is affecting water quality; or~~

32 ~~(v) Establishment of a restoration area equal in~~
33 ~~quality and quantity of the area encroaching~~
34 ~~into the 50 foot management buffer~~
35 ~~elsewhere on the lot or parcel in a way that~~
36 ~~maximizes the purpose and intent of the~~
37 ~~protected corridor.~~

1 All mitigation areas shall be located in the general
2 vicinity of the disturbed area (e.g., within the
3 immediate drainage area) and shall be similar in
4 size and quality as the disturbed area prior to
5 development activity.
6

7
8 (b) ~~Pre-existing Conditions.~~ On site stream bank stabilization
9 and vegetation restoration shall be required if a site shows
10 evidence of pre-existing erosion that is affecting water
11 quality and/or stream banks that are unstable. Restoration
12 shall be performed in accordance with Chapter 7 of the
13 Facilities Standards Manual.

14
15 (B) ~~Alterations to the 100-Year Floodplain.~~ No alterations shall occur in the
16 100-year floodplain to create additional buildable land by elevating land or
17 relocating or altering a natural stream channel, except as specifically
18 allowed as either a permitted or special exception use. Where alterations
19 are permitted, they shall be pursuant to the provisions in this Section 4-
20 2000, and the following criteria:

21
22 (1) ~~Alterations to the floodplain shall result in no off site increase in~~
23 ~~the water surface elevation of the base flood. Alterations in the~~
24 ~~floodway shall result in no rise in the water surface elevation of the~~
25 ~~base floodplain consisting of the water channel and overbank areas~~
26 ~~capable of conveying the deep and fast moving water discharge of~~
27 ~~the base flood as defined in the Federal Emergency Management~~
28 ~~Agency Flood Insurance Study.~~

29
30 (2) ~~Alterations to the floodplain shall not create erosive water velocity~~
31 ~~on or off site (where erosive water velocity is based on analysis of~~
32 ~~the surface material and permissible velocities for specific cross~~
33 ~~sections affected by the proposed alteration, using standard~~
34 ~~engineering tables as a general guide), and the mean velocity of~~
35 ~~stream flow at the downstream end of the site after alteration shall~~
36 ~~be no greater than the mean velocity of the stream flow under~~
~~existing conditions.~~

37
38 (3) ~~The applicant shall provide plans for any alteration to the 100-year~~
39 ~~floodplain. The floodplain alteration plan shall further include~~
40 ~~plans for erosion control of cut and fill slopes and restoration of~~
41 ~~excavated areas. The site plan shall incorporate the use of natural~~
42 ~~materials (earth, stone, wood) on cut and fill slopes and provide for~~
~~tree protection.~~

1 (4) ~~The flood carrying capacity within the altered floodplain shall be~~
2 ~~maintained.~~

3 (5) ~~Alterations to the floodplain shall be in conformance with the~~
4 ~~provisions of Chapter 1220 of the Codified Ordinances of Loudoun~~
5 ~~County and the Erosion and Sediment Control Law, Va. Code~~
6 ~~Section 21-89.1 et seq.~~

7 (C) ~~**Vehicular, Pedestrian, and Utility Crossings.** Where permitted, road,~~
8 ~~driveway, railroad track, path and trail, and utility crossings of streams and~~
9 ~~rivers shall be subject to Chapter 5 of the Facilities Standards Manual and~~
10 ~~the following conditions:~~

11 (1) ~~The proposed activity shall be supported by an analysis conducted~~
12 ~~by a qualified and licensed professional engineer (P.E.) or Class B~~
13 ~~surveyor (L.S.) that establishes that:~~

14 (a) ~~No available, economically feasible alternative exists to~~
15 ~~locating within the Protected Corridor or to crossing the~~
16 ~~river or stream; and~~

17 (b) ~~The crossing is designed to avoid or mitigate environmental~~
18 ~~damage to the Protected Corridor and disturbance of the~~
19 ~~aquatic environment, alteration of the waterway,~~
20 ~~downstream migration of sediment, damage to bank~~
21 ~~stability, and damage to stream or river bank and riparian~~
22 ~~area vegetation.~~

23 (2) ~~The applicant shall mitigate any disturbance of the Protected~~
24 ~~Corridor by grading and planting to enhance the biological and~~
25 ~~hydrologic processes. Provisions for reclamation of the disturbed~~
26 ~~area shall be approved by the County and included in any~~
27 ~~development or subdivision agreement for the project, with~~
28 ~~adequate security to guarantee that the reclamation will be~~
29 ~~completed.~~

30 (3) ~~Any stream or river crossing shall minimize the length of the~~
31 ~~crossing and minimize clearing and other land disturbance.~~

32 (4) ~~Utility crossings shall be combined with road, railroad track, and~~
33 ~~driveway crossings when feasible. Crossings in a subdivision shall~~
34 ~~be spaced with a minimum separation of one thousand (1,000) feet~~
35 ~~unless closer spacing will reduce adverse environmental impacts.~~

36 (5) ~~Rights of way shall be the minimum width necessary for~~
37 ~~installation, access, and maintenance.~~

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1 ~~(6) The County shall allow construction of low water crossings~~
2 ~~intended for use only by pedestrians, equestrians, or bicyclists, but~~
3 ~~not for crossings designated for automobiles or other vehicles;~~
4 ~~except as specified in the Facilities Standards Manual.~~

5 ~~(7) Vehicular crossings shall be designed to allow wildlife to pass over~~
6 ~~or under the crossings.~~

7 ~~(D) **Stormwater Management.** Stormwater management structures;~~
8 ~~practices, and activities permitted in the Protected Corridor, shall be~~
9 ~~subject to development standards in Chapter 5 of the Facilities Standards~~
10 ~~Manual, and shall adhere to the Virginia Stormwater Management~~
11 ~~Handbook and the Virginia Erosion and Sediment Control Handbook.~~

12 ~~(E) **Lakes, Ponds, and Reservoirs.** Lakes, ponds, and reservoirs shall be~~
13 ~~designed using best management practices and with measures to mitigate~~
14 ~~the following potential adverse environmental impacts:~~

15 ~~(1) Wetland loss;~~

16 ~~(2) Forest habitat loss;~~

17 ~~(3) Barriers to fish migration;~~

18 ~~(4) Groundwater contamination;~~

19 ~~(5) Downstream warming;~~

20 ~~(6) Downstream water quality during dry weather;~~

21 ~~(7) Potential interruption of downstream bedload movement;~~

22 ~~(8) Damage to historic and cultural resources and archaeological sites;~~
23 ~~and~~

24 ~~(9) Water quality of the pond or lake effluent.~~

25 ~~(F) **Recreation Facilities.** Recreation facilities shall be subject to the~~
26 ~~following standards:~~

27 ~~(1) Access to waterways shall be limited to specific points of entry as~~
28 ~~approved by the County.~~

29 ~~(2) Facilities shall be located on previously disturbed areas to the~~
30 ~~maximum extent feasible.~~

31 ~~(3) Facilities shall be designed to minimize disturbance to the~~
32 ~~biological and hydrologic processes in the Protected Corridor.~~

(4) ~~All paths and trails shall be constructed of permeable materials (e.g., permeable soft or pervious hardstand materials, including but not limited to pervious bitumen or concrete).~~

(G) ~~**Silviculture.** Silviculture shall be subject to best management practice measures and shall be conducted only in accordance with an approved Forest Management Plan that is approved by both the Virginia Division of Forestry and the County. Silviculture does not include commercial harvesting or clear cutting of a forest.~~

(H) ~~**Tree and Vegetation Conservation.** Natural vegetation in the Protected Corridor shall be preserved in accordance with Chapter 7 of the Facilities Standards Manual. Existing healthy trees and vegetation within the Protected Corridor shall be supplemented with additional native planting and landscaping approved by the County where necessary. This provision shall not prohibit removal of dead trees/vegetation that present a danger to public safety, noxious weeds, non native trees/vegetation that threaten native species growth or reintroduction, or any other tree/vegetation that is a threat to the public health or safety.~~

~~**4-2009 Permitted Reductions in Protected Corridor Width.** Where the Protected Corridor on a specific property includes a 50 foot Management Buffer as established by Section 4-2005(A)(1)(a) above, the County Zoning Administrator, upon the recommendation of the County Engineer, may approve a reduction of or elimination of the 50 foot Management Buffer in the following circumstances:~~

(A) ~~**Demonstration of No Adverse Impact.** If the applicant can demonstrate that the existing floodplain is of sufficient size and quality so as to protect water quality and meet other purposes set forth in Section 4-2001 and that reduction of the Management Buffer will not adversely impact other RSCOD elements, or~~

(B) ~~**Economic Use of Property.** If the area of the property to be developed that is outside the Protected Corridor, including the 50 foot Management Buffer, is insufficient to accommodate the density or intensity of development allowed in the underlying zoning district, provided that:~~

(1) ~~The applicant shall mitigate any adverse environmental impacts the reduction or elimination may have on primary conservation areas located on or off site as identified through the conservation design process in Section 6-2000, if applicable.~~

(2) ~~Any reduction shall be the minimum necessary to achieve a reasonable buildable area for a principal structure and necessary utilities.~~

AMENDMENTS TO ARTICLE 5

- Section 5-500 Temporary Uses/Zoning Permits
- Section 5-600 Additional Regulations for Specific Uses
- Section 5-700 Transition (TR) Districts Lot Standards
- Section 5-703 Agricultural Rural (AR) District Cluster Regulations
- Section 5-1200 Signs
- Section 5-1300 Tree Planting and Replacement
- Section 5-1400 Buffering and Screening
- Section 5-1500 Performance Standards

(A) Construction Related Temporary Uses.

- (1) Construction and Sales Trailers. Temporary buildings, including but not limited to, construction and sales trailers, and storage of materials are permitted in conjunction with the construction of a building, buildings, subdivision, infrastructure, or development ~~when located on the same parcel where the construction is taking place and~~ when limited to the duration of the construction. Temporary buildings may be erected after preliminary subdivision plat or site plan approval so long as zoning requirements are met for the lot on which the temporary buildings are placed and appropriate building permits have been obtained. Such temporary buildings shall be removed as a condition of final bond release
- (2) Temporary Dwelling unit in conjunction with construction of a dwelling. ~~However, the~~ The erection and occupancy of a temporary dwelling for up to twelve (12) months, which may be extended by the Zoning Administrator in 6 month increments, is permitted during the construction of a dwelling on the same lot subject to obtaining ~~requires a~~ zoning permit, to be issued concurrently with or after the issuance of the building permit. ~~Construction of a house displayed for advertising purposes, not intended to be sold or occupied as a dwelling, whether in connection with a residential development or otherwise, shall not commence until a performance bond adequate to ensure the removal of the structure has been posted.~~
- (2) Sales and leasing. Residential and non-residential sales and leasing are permitted as a temporary use in a dwelling, a model home, or temporary building located in the same subdivision or development where the dwellings or non-residential buildings are to be located and offered for sale or lease. The sales use is permitted until the issuance of the last occupancy permit within the subdivision or development.
- (3) Model Homes. Single family detached model homes are permitted in all districts where residential uses are allowed. Single family detached model homes may be constructed prior to record plat approval so long as zoning requirements are met for the lot on which the home is constructed and appropriate building permits have been obtained. If a model home has been constructed prior to record plat approval, it shall be depicted on the record plat. Single family attached model homes, multi-family model units, and model home courts are permitted subject to first obtaining record plat or site plan approval. In addition, if any model home incorporates features that are atypical to the ultimate residential use of the home, such as, but not limited to, utilization of the garage for a sales office without the provision of adequate on-site parking, or provision of a centralized parking area for a model court, then the use is also subject to

1 review and approval through a site plan amendment process.
2 Alternatively, the model unit or model court may be incorporated in the
3 construction plans and profiles of the applicable development subdivision
4 or site plan. The County may require a bond as appropriate to ensure that
5 the atypical features including temporary parking lots will be removed or
6 brought into conformance prior to conversion of the unit for residential
7 occupancy. Notwithstanding, nothing herein shall be construed so as to
8 require a garage in a model home to be utilized for parking, if the unit or
9 lot otherwise meets the parking requirements of this ordinance. A model
10 home shall obtain an occupancy permit prior to residential occupancy

11 (B) **Temporary Sales.** Temporary sales of produce, Christmas trees, fireworks, and
12 other seasonal goods, may be permitted on application for a temporary zoning
13 permit to the Zoning Administrator. Such permit may impose conditions
14 necessary to alleviate any adverse impacts such as provisions for adequate
15 parking, traffic safety, fire safety, hours of operation, provision for sewage
16 disposal, and other health and safety concerns the Zoning Administrator may
17 deem necessary, and the posting of a bond to ensure timely removal of structures
18 and materials and restoration of the area. A temporary zoning permit for
19 temporary sales shall be valid for a period not to exceed 45 days, unless extended,
20 and shall require that all structures and materials be removed within such time
21 period. At a minimum:

- 22 (1) Structures for temporary sales shall not exceed 400 square feet in floor
23 area nor be closer than 35 feet to a right of way or prescriptive easement
24 of a road.
- 25 (2) Entrances and exits to roads shall be clearly delineated.
- 26 (3) Entrances and exits shall be so located as to provide safe ingress and
27 egress from roads and shall be channeled to prevent unrestricted access to
28 and from the premises.
- 29 (4) No more than two (2) signs consistent with Section 5-1203(S) of this
30 Ordinance shall be permitted.

31 (C) **Temporary Special Events.** Temporary special events may be permitted on
32 application for a temporary zoning permit to the Zoning Administrator, subject to
33 this subsection's standards and requirements.

- 34 (1) ~~**Applicability.** Except as exempted below, these provisions apply to~~
35 ~~temporary special events that are planned for or which reasonably may be~~
36 ~~expected to attract more than 100 persons at any one time. Temporary~~
37 ~~special events include, but are not limited to, circuses, music fairs or~~
38 ~~concerts, tent revivals, art shows, crafts shows, rodeos, corn mazes,~~
39 ~~festivals, civil war enactments, equestrian shows and events, corporate~~
40 ~~receptions, and weddings unless exempt under subsection 5-500(C)(2)~~

below. See Article 8 of this Zoning Ordinance for the definition of the term "special event."

(2) ~~**Exempt Activities.** The following special events are exempt from the requirements of this section (i.e., they may occur without a temporary zoning permit). Exempt special events, however, shall remain subject to all other applicable provisions of this Ordinance and the Loudoun County Code, including, but not limited to standards governing health, sanitation, and noise control.~~

(a) ~~Special events planned or reasonably expected to attract less fewer than 100 persons at any one time, and not occurring more than twenty four (24) times in any calendar year.~~

(b) ~~Special events occurring within, or upon the grounds of, a private residence, where the property owner receives no compensation for hosting the event and guests/attendees are not charged an admission fee.~~

(c) ~~Any event sponsored in whole or in part by Loudoun County or another political subdivision of the Commonwealth of Virginia;~~

(d) ~~Any organized special events conducted at sites or facilities typically intended, used, or planned and designed for such events. Examples of such exempt activities include, but are not necessarily limited to:~~

(i) ~~Sporting events such as golf, soccer, softball, and baseball tournaments conducted on courses or fields intended and used for such activities;~~

(ii) ~~Wedding services conducted at country inns, banquet facilities/halls, reception halls, or similar facilities;~~

(iii) ~~Wine tasting and wine tasting dinners at Virginia Farm Wineries or other wineries whose facilities are designed for such events;~~

(iv) ~~Conferences, corporate meetings, including picnics, at and similar gatherings events at rural agricultural corporate campuses retreats; and~~

(v) ~~Large dinners and special events at country inns and bed and breakfast inns designed for that purpose.~~

(c) ~~Special events for the purpose of selecting candidates for office, political fundraising, or meeting to debate public policy.~~

1 (2) **Exemption for Special Events Approved as Part of a Special**
2 **Exception Use.** Temporary special events that are expressly approved as
3 part of a special exception use are exempt from this subsection's
4 requirements for a temporary zoning permit. If specific facilities or areas
5 will be constructed or used to host the proposed special events, they shall
6 be shown on the site plan required for the special exception use. Such
7 temporary special events shall comply with any applicable conditions
8 stated in the special exception approval, and all other applicable
9 provisions in ~~this Section 5-500(C)~~, the Zoning Ordinance, and the
10 Loudoun County Code.

11 (3) **Permitted Locations.** Temporary special events ~~not otherwise exempt~~
12 ~~under this Section 5-500(C)~~ shall be permitted only when proposed to be
13 held, in whole or in part, on any of the following properties, or a
14 combination thereof:

15 (a) Public or Private property within one or more of the Rural and
16 Transition Residential Zoning Districts;

17 (b) Nonresidential private property within one or more of the
18 Suburban Zoning Districts or Planned Development (PD) Zoning
19 Districts; or

20 (c) Residential private property within any Suburban Zoning Districts
21 or within a Planned Development (PD) Zoning District that
22 contains a total gross acreage of at least two (2) acres.

23 (4) **Referral Authorized.**

24 (a) Upon acceptance of the application for a temporary special event
25 permit, the Zoning Administrator may refer the application for
26 comments to any town, county, or state departments or agencies, as
27 appropriate, for full and adequate review of the merits of the
28 application.

29 (b) Each reviewing agency or department shall submit its comments in
30 writing to the Zoning Administrator within fifteen (15) calendar
31 days from receipt of the Administrator's referral request.

32 (5) **Minimum Standards and Criteria for Review.** The Zoning
33 Administrator shall approve a temporary zoning permit application for a
34 special event if it meets all of the following standards and criteria:

35 (a) The proposed temporary event shall be located, operated, and
36 maintained in a manner consistent with the provisions of this
37 Ordinance.

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- (b) The particular location requested can reasonably accommodate the proposed temporary event, given the proposed use's nature, size, and duration.
- (c) The operation of the requested event at the location proposed and within the time period specified shall not create significant adverse impacts, including but not limited to environmental, visual, glare, traffic, noise, or odor impacts, on adjacent properties, or improvements on adjacent properties, or in the surrounding area.
- (d) The proposed event shall not create an unreasonable risk of:
- (i) Significant damage to public or private property, beyond normal wear and tear;
 - (ii) Injury to persons;
 - (iii) Public or private disturbances or nuisances;
 - (iv) Unsafe impediments or distractions to, or congestion of, vehicular or pedestrian travel; or
 - (v) Additional police, fire, trash removal, maintenance, or other public services demands, unless substantially mitigated by the applicant or operator.
- (e) The time and location requested for the proposed special event shall not be already permitted or reserved for other activities.
- (f) Permanent alterations to the site are prohibited, unless the Zoning Administrator specifically approves the alteration so that the permit applicant can comply with this subsection 5-500(C).
- (g) Permanent signs are prohibited. All temporary signs approved under Section 5-1200 of this Ordinance and that are associated with the ~~temporary~~ event use shall be removed when the special event ends.
- (h) ~~Temporary~~ special events shall not violate any applicable conditions of approval that apply to the principal use on the site.
- (i) The applicant or operator has received or complies with any other required permits, such as health department permits, or other federal, state, or county regulations.
- (6) **Authority for Reasonable Conditions of Approval.** The Zoning Administrator may impose reasonable conditions ~~reasonably~~ necessary to assure compliance with the standards in this subsection, to ensure that

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1 operation and maintenance of the special event mitigate potential adverse
2 impacts on existing uses on adjoining properties and in the surrounding
3 area, and to protect the public health, safety and general welfare.
4 Conditions may address, but are not limited to, provisions for adequate
5 parking, storage, and lighting; provisions for security, traffic safety, fire
6 and life safety; conditions limiting hours of operation; provision for
7 adequate sewage disposal; and any other health and safety concerns the
8 Zoning Administrator may deem necessary to comply with the standards
9 in Section 5-500 (C)(6), above. In addition, the Zoning Administrator
10 may require the posting of a bond to ensure timely removal of structures
11 and materials and restoration of the area.

12 (7) **Term of Approval/Permit.** A temporary zoning permit for a ~~temporary~~
13 special event authorized pursuant to this subsection shall be limited to a
14 maximum duration of fourteen (14) days, unless otherwise specifically
15 authorized or extended by the Zoning Administrator. A permittee may
16 request an extension of the approval term in writing before the expiration
17 of the original approval term and the Zoning Administrator may approve
18 an extension upon a finding that the ~~temporary~~ special event has
19 substantially complied with all conditions of the original approval, and
20 that the extension will not create substantial adverse impacts on adjacent
21 properties. All structures and materials related to the special event shall
22 be removed within the approval time period or as such period may be
23 extended.

24 (8) **Maximum Number of Non-exempt Special Events per Property.**
25 Within any single calendar year, the same property may host no more than
26 ten (10) ~~temporary~~ special events pursuant to this subsection. The
27 temporary use permits for these special events may be reviewed and
28 approved concurrently. A minimum of ~~thirty (30)~~ 14 days shall lapse
29 between ~~temporary~~ special events on any one property, or the subsequent
30 special event shall be a minimum of two thousand (2,000) feet from the
31 location of the previous event.

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